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PORT OF PORTLAND

May 30, 2002

Mr. Rodney Struck
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Subject: Terminal 1 South
Response to Review Comments on Removal Action Work Plan
ECSI File No. 2042

Dear Mr. Struck:

The Port of Portland (Port) has prepared the following responses to the Oregon Department of Environmental Quality (DEQ) review comments on the Terminal 1 (T1) South Removal Action Work Plan, as documented in your letter dated May 3, 2002. The Port's response to DEQ's comments (repeated below) are summarized below.

1. Section 2.3. Page 3. The summary of the risk assessment results should [be] revised as necessary to address DEQ's comments on the Baseline Risk Assessment (DEQ Letter dated February 12, 2002). It should be noted in the discussion for Areas B and C that arsenic poses an unacceptable risk to potential future residents. This section should also address potential risks to ecological or human health associated with groundwater discharging to surface water.

   Response: This section was expanded to discuss potential risks to future construction workers and groundwater to surface water (human consumption of fish) pathways. Potential ecological risks were already discussed. Also, the presence of arsenic above risk levels but below background concentrations is now noted.

2. Section 2.4. Page 4. This summary should be revised as necessary to address DEQ's comments on the Feasibility Study (DEQ Letter dated May 3, 2002).

   Response: This section has been revised consistent with the FS. Table 1 from the FS (showing cleanup levels for depth range and receptor type) has replaced Table 1 in the work plan.

3. Section 3.0. Page 5. Removal Action Cleanup Objective. The basis for the cleanup Levels should be described in more detail. The work plan should clearly state what exposure scenarios the proposed cleanup levels are designed to protect. For example,

it could be stated that the "residential" remedial action levels are considered protective of future excavation worker or commercial/occupational exposure worker exposures.

It is unclear what soils are being removed to the proposed residential cleanup levels and what soils are being removed based on "hot spot" concentrations. The work plan should describe what residual contamination will exist following implementation of the proposed soil removal.

Response: This section has been revised. More specific references have been added to the FS and the cleanup levels in the new Table 1.

4. Section 3.0. Page 5. Soil Exceeding Cleanup Levels. This section and Figure 3 should clearly describe the extent of soil contamination exceeding residential cleanup values. It is unclear from the description how the extent of contamination exceeding the proposed cleanup level was delineated. The basis for this depth of contamination should be provided.

   If the proposed cleanup levels are used to delineate the extent of soil contamination above risk based concentrations (RBCs), the extent and depths of contamination shown on Figure 3 would be different. The possibility of excavating contaminated soils present at depth in the future and re-distributing this soil at the surface should be considered.

   Response: The development of the extent of cleanup was expanded in the FS. This discussion is referenced in Section 3. It is now stated in this section that all samples above the cleanup levels are being removed. The impact of re-distributing soil in the future is addressed in the risk assessment and FS.

5. Section 3.0. Page 5. Future Site Development. The basis for the excavation areas and depths shown on Figure 4 should be described. Will excavation be needed in other areas of the site for future site development?

   Response: Explanation for the development of Figure 4 was added. The figure was developed by overlaying the proposed site development on a figure showing the extent of TPH in soil (a conservative approach because the extent of TPH is larger than the extent of soil above risk-based concentrations). Excavation will occur elsewhere on the site, but is not expected to intersect known areas of contamination.

6. Section 3.0. Page 5. Waste Designation. The hot spot designations for sample locations B-38 and B-68 should be A-3, and A-2 respectively.

   Response: This change has been incorporated.

7. Section 4.1. Page 7. Removal of Railroad Tracks. It appears that railroad track removal is also required in area 16.

Response: This change has been incorporated.

8. Section 4.3. Page 8. Excavation Limits. The basis for the extent and the depth of the excavations shown in Figure 5 and listed in Table 2 should be discussed. The fourth bullet states that "*All other excavation limit . . . shall be determined based on TPH concentrations (subject to the sale agreement and amendments).*" Please specify the target TPH concentration and the basis for this value.

   Response: This section was expanded. Figure 5 was developed by overlaying Figure 3 and Figure 4 and selecting the greater extent of either. The fourth bullet was revised to define the TPH limit. The value is 700 mg/kg, the urban resident child concentration developed for the Hoyt Street Yards. This site is within several blocks of Terminal 1, has the same contaminant types, and will be developed in a similar way.

9. Table 2/Figures 4 & 5
   - The hot spot around B-92 is not adequately covered by Removal Area #17- the extent of excavation should be enlarged.
   - The hot spot around B-68 (Area 3) is excavated to 3 ft. on Table 2/Figure 5, but is deeper on Figure 4. Please correct or justify the basis for the change in depth.

   Response: The hot spot at B-92 is based on a single sample. The extent shown on Figure 3 is a circle that is arbitrarily 30 feet in diameter. The extent shown on Figure 5 is what can actually be excavated within the limits of existing structures. The final extent of the excavation will be based on confirmation sampling.

   The hot spot at B-68 is correctly shown as 3 feet. The excavation is this area is deeper (Figure 4) for other (non-hot spot) contamination (TPH). The volume within Area 3 but below 3 feet is accounted for in Area 6.

10. Section 4.3. Page 9. Stockpiling. Soil that fails the toxicity leaching characteristic procedure (TCLP) may require stabilization due to RCRA Land Disposal Restrictions (LDR) to disposal. The stabilized soil must pass TCLP regulatory criteria prior to disposal in an offsite Subtitle D permitted solid waste landfill. Potential soil stabilization methods and testing should be described in the work plan.

    Response: If stabilization is required, it will be done by the landfill prior to disposal. This is a common service offered by hazardous waste landfills. The "Disposal" paragraph was modified to clarify this point.

11. Section 4.3. Page 9. Hauling. It should be noted that if soils excavated from the B-38 and B-68 areas are determined to be hazardous waste that these soils must be transported under manifest by a licensed hazardous waste transporter.

    Response: This paragraph was modified to note that licensed haulers must be used to haul hazardous waste.

12. Section 4.4. Page 10. Backfill. The text describes clean overburden from Area 19, but Table 2 indicates clean overburden from Area 18, not 19. Please correct this discrepancy.

    Response: This paragraph was revised to indicate Area 18.

13. Section 4.4 and 5.1. Pages 10 and 12. "Clean" overburden should be analyzed to confirm levels are below target cleanup concentrations.

    Response: Section 5.1 was modified to include sampling of the clean overburden stockpiles.

14. Section 5.1. Page 12. "Clean" overburden should be analyzed to confirm levels are below target cleanup concentrations. One soil sample should be collected for each 50 cubic yards of stock piled soil. In addition, a minimum of one import backfill soil sample should be collected from each source of import backfill used by the Contractor. For each source, one sample should be collected for each 500 cubic yards of imported backfill material.

    Response: See response to Comment 13. We have proposed one composite (5-point) sample for each 200 cubic yards. Composite samples better represent the actual concentrations in the soil that result from excavation, handling, stockpiling, and filling. Sampling will not be conducted on the import soil. The source is soil currently owned by the Port of Portland and approved for use as clean fill.

15. Section 5.1. Page 12. Confirmation Soil Samples. Confirmation samples should be collected from each excavation bottom and available sidewall. DEQ recommends that confirmation samples be collected as follows:

    - One bottom sample for approximately every 1,600 square feet (ft^2) of bottom excavation area or at one sample for from each excavation area shown (existing data can be included as appropriate).

    - Excavation side samples should be collected approximately every 50 lineal feet along the wall. Samples should be collected [from] each depth interval used in the residual risk assessment (from the 0-3 feet below ground surface (bgs) (i.e., future residential) sampling depth and the 3–15 ft. bgs depth (i.e., future excavation/construction worker scenario).

    Response: We propose confirmation soil sampling for every 2,500 ft^2 of bottom excavation area (one sample minimum per area). These are in addition to the existing data. Sidewall samples will be collected at a frequency of once each 100 lineal feet of wall (with a minimum of one location per wall). At each sample location, a sample will be collected from each of the 0-3 feet and 3-15 feet depth intervals. This sampling frequency is justified because the excavation limits will be greater than identified in the

FS to meet the risk based reductions for future development. Section 5.1 has been expanded and Table 3 and Figure 7 have been added to clarify the confirmation sample numbers and locations.

16. Section 5.2/Appendix. A. Please provide a clear definition of what analyses will be conducted on which samples or in each excavation area.

    Response: Section 5.2 and Appendix A were revised. Table 3 has been added showing the number of samples to be collected. Table A-1 was revised. Figure 7 was added showing the approximate locations of samples to be collected and the proposed samples for PAH analyses.

17. Section 6.2. Page 14. The final report should include a section that presents the hazardous waste determination and documentation of the appropriate disposal of any hazardous waste.

    Response: This section was modified to indicate that this documentation will be presented in the final report.

Please contact me at (503) 944-7533 with any questions. Your prompt attention is appreciated.

Sincerely,

Joe Mollusky

Joe Mollusky
Environmental Project Manager
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